



Maryland Department of Environment
Water Management Administration
Compliance Program
1800 Washington Blvd, Baltimore MD 21230
Cambridge Office (410) 901-4020

Field Inspection Report by: Michele Burroughs

Permit / Approval Numbers: DP-2530/MD0021091

Inspection Date: June 15-16, 2009

Facility Address: 7206 National Seashore Lane, Berlin, MD 21811

Site Name: Assateague Island National
Seashore WWTP

Site Status: ACTIVE

Site Condition: NONCOMPLIANT

Inspection Type: Initial Inspection, Compliance
Evaluation Inspection

Recommended Action: Refer to Division Chief

Contact(s):
Steven Main, Operator, National Park Service
Jocelyn Korb, Operator, National Park Service

Evidence Collected: Visual Observation

Inspection Reason: Routine Scheduled
Initial Inspection of Fiscal Year

INSPECTION FINDINGS

A. Permit Verification

The facility holds State Permit Number 05-DP-2530, NPDES Permit MD0021091, which became effective July 1, 2006 and expires June 30, 2011. The permit renewal is due to the Department no later than April 30, 2010, unless a later date is granted by the Department.

B. Records

April 2009 - The DMR shows noncompliance for total phosphorus and total nitrogen concentrations and loadings. The laboratory data sheets were available and complete; however the chains of custody were not available on-site. Mr. Main stated that the laboratory maintains the chains of custody. The DMR reported the total phosphorus monthly average loading as 0.24 lbs/day, the weekly average total phosphorus loading as 0.35 lbs/day, the total phosphorus monthly average concentration as 8.12 mg/l, and the weekly average total phosphorus concentration as 9.35 mg/l with 5 excursions. The number of excursions for the total phosphorus should have been reported as 12 excursions. The DMR reported the total nitrogen monthly average loading as 1.19 lbs/day, the weekly average total nitrogen loading as 1.70 lbs/day, the total nitrogen monthly average concentration as 45.17 mg/l, and the weekly average total nitrogen concentration as 65.51 mg/l with 5 excursions. The number of excursions for the

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total nitrogen should have been reported as 12 excursions. On 4/23, the ortho-phosphorus result of 5.83 mg/l was transcribed to the MOR as 8.83 mg/l. There was no 5 day letter in the file for the total nitrogen and total phosphorus excursions, as required by the permit.

March 2009 – The DMR shows noncompliance for total phosphorus and total nitrogen concentrations and loadings. The laboratory data sheets were available and complete; however the chains of custody were not available on-site. Mr. Main stated that the laboratory maintains the chains of custody. On 3/5, all of the nutrient influent results were reported on the MOR as the effluent results. The facility reported loadings as concentrations during this monitoring period. The DMR reported the total phosphorus monthly average loading as 0.23 lbs/day, the weekly average total phosphorus loading as 0.41 lbs/day, the total phosphorus monthly average concentration as 0.23 mg/l, and the weekly average total phosphorus concentration as 0.41 mg/l with 4 excursions. The total phosphorus concentration results should have been reported as 8.90 mg/l for the monthly average and 9.90 mg/l for the weekly average. The number of excursions for the total phosphorus should have been reported as 10 excursions. The DMR reported the total nitrogen monthly average loading as 1.41 lbs/day, the weekly average total nitrogen loading as 2.45 lbs/day, the total nitrogen monthly average concentration as 1.31 mg/l, and the weekly average total nitrogen concentration as 2.45 mg/l with 4 excursions. . The total nitrogen concentration results should have been reported as 51.75 mg/l for the monthly average and 61.85 mg/l for the weekly average. The number of excursions for the total phosphorus should have been reported as 8 excursions. The monthly average ammonia concentration was reported as 0.06 mg/l, but should have been reported as 6.37 mg/l. The monthly average organic nitrogen concentration was reported as 0.04 mg/l, but should have been reported as 4.44 mg/l. The nitrate + nitrite monthly average concentration was reported as 1.31 mg/l, but should have been reported as 40.94 mg/l. The ortho phosphate monthly average concentration was reported as 0.02 mg/l, but should have been reported as 7.84 mg/l. There was no 5 day letter in the file for the total nitrogen and total phosphorus excursions, as required by the permit.

February 2009 – The DMR was not completed and therefore not available upon arrival at the facility. The DMR was completed on 6/15/2009. The DMR shows noncompliance for total phosphorus and total nitrogen concentrations and loadings. The laboratory data sheets were available and complete; however the chains of custody were not available on-site. Mr. Main stated that the laboratory maintains the chains of custody. The DMR reported the total phosphorus monthly average loading as 0.13 lbs/day, the weekly average total phosphorus loading as 0.23 lbs/day, the total phosphorus monthly average concentration as 7.91 mg/l, and the weekly average total phosphorus concentration as 8.57 mg/l with 10 excursions. The DMR reported the total nitrogen monthly average loading as 0.63 lbs/day, the weekly average total nitrogen loading as 1.07 lbs/day, the total nitrogen monthly average concentration as 37.82 mg/l, and the weekly average total nitrogen concentration as 42.61 mg/l with 10 excursions. The number of excursions for the total nitrogen should have been reported as 8 excursions. There was no 5 day letter in the file for the total nitrogen and total phosphorus excursions, as required by the permit.

January 2009 - The DMR shows noncompliance for total phosphorus and total nitrogen concentrations and loadings. The laboratory data sheets were available and complete; however

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the chains of custody were not available on-site. Mr. Main stated that the laboratory maintains the chains of custody. The DMR reported the total phosphorus monthly average loading as 0.37 lbs/day, the weekly average total phosphorus loading as 1.24 lbs/day, the total phosphorus monthly average concentration as 14.60 mg/l, and the weekly average total phosphorus concentration as 28.54 mg/l with 4 excursions. The DMR should have reported the total phosphorus monthly average loading as 0.13 lbs/day, the weekly average total phosphorus loading as 0.26 lbs/day, the total phosphorus monthly average concentration as 8.95 mg/l, and the weekly average total phosphorus concentration as 10.51 mg/l with 9 excursions. The DMR reported the total nitrogen monthly average loading as 0.55 lbs/day, the weekly average total nitrogen loading as 1.24 lbs/day, the total nitrogen monthly average concentration as 36.17 mg/l, and the weekly average total nitrogen concentration as 39.13 mg/l with 4 excursions. The number of excursions for the total nitrogen should have been reported as 8 excursions. On 1/8/2009, the total phosphorus result of 5.94 mg/l was transcribed onto the MOR as 28.54 mg/l. On 1/29/2009, the total nitrogen result of 37.97 mg/l was transcribed onto the MOR as 38.21 mg/l. There was no 5 day letter in the file for the total nitrogen and total phosphorus excursions, as required by the permit.

December 2008 - The DMR shows noncompliance for total phosphorus and total nitrogen concentrations and loadings. The laboratory data sheets were available and complete; however the chains of custody were not available on-site. Mr. Main stated that the laboratory maintains the chains of custody. The DMR reported the total phosphorus monthly average loading as 0.19 lbs/day, the weekly average total phosphorus loading as 0.37 lbs/day, the total phosphorus monthly average concentration as 8.37 mg/l, and the weekly average total phosphorus concentration as 9.83 mg/l with 5 excursions. The facility reported the ortho-phosphorus concentration results on the DMR rather than the total phosphorus results. The total phosphorus monthly average concentration should have been reported as 9.12 mg/l and the weekly average total phosphorus concentration as 10.76 mg/l. The number of excursions for the total phosphorus should have been reported as 12 excursions. The DMR reported the total nitrogen monthly average loading as 0.44 lbs/day, the weekly average total nitrogen loading as 0.69 lbs/day, the total nitrogen monthly average concentration as 9.12 mg/l, and the weekly average total nitrogen concentration as 10.76 mg/l with 5 excursions. The facility reported the total phosphorus concentration results as the total nitrogen results on the DMR. The total nitrogen monthly average concentration should have been reported as 21.36 mg/l and the weekly average concentration as 24.51 mg/l. The number of excursions for the total nitrogen should have been reported as 9 excursions. On 12/18/2008, the total nitrogen result of 20.28 mg/l was transcribed to the MOR as 20.37 mg/l. On 12/30/2008, the total phosphorus result of 8.53 mg/l was transcribed to the MOR as 9.12 mg/l. There was no 5 day letter in the file for the total nitrogen and total phosphorus excursions, as required by the permit.

November 2008 - The DMR shows noncompliance for total phosphorus and total nitrogen concentrations and loadings. The laboratory data sheets were available and complete; however the chains of custody were not available on-site. Mr. Main stated that the laboratory maintains the chains of custody. The DMR reported the total phosphorus monthly average loading as 0.37 lbs/day, the weekly average total phosphorus loading as 0.71 lbs/day, the total phosphorus monthly average concentration as 15.41 mg/l, and the weekly average total phosphorus concentration as 19.60 mg/l with 4 excursions. The number of excursions for the total

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phosphorus should have been reported as 10 excursions. The DMR reported the total nitrogen monthly average loading as 0.36 lbs/day, the weekly average total nitrogen loading as 0.77 lbs/day, the total nitrogen monthly average concentration as 14.92 mg/l, and the weekly average total nitrogen concentration as 17.71 mg/l with 4 excursions. The number of excursions for the total nitrogen should have been reported as 8 excursions. On 11/20/2008, the ortho-phosphorus result of 12.33 mg/l was transcribed as 16.50 mg/l on the MOR and the total phosphorus results of 14.92 mg/l was transcribed as 19.60 mg/l on the MOR. On 11/25/2008, the TSS result of 1.51 mg/l was transcribed as 1.21 mg/l on the MOR. There was no 5 day letter in the file for the total nitrogen and total phosphorus excursions, as required by the permit.

October 2008 - The DMR shows noncompliance for total phosphorus and total nitrogen concentrations and loadings. The laboratory data sheets were available and complete; however the chains of custody were not available on-site. Mr. Main stated that the laboratory maintains the chains of custody. The DMR reported the total phosphorus monthly average loading as 0.50 lbs/day, the weekly average total phosphorus loading as 0.87 lbs/day, the total phosphorus monthly average concentration as 13.8 mg/l, and the weekly average total phosphorus concentration as 19.0 mg/l with 5 excursions. The number of excursions for the total phosphorus should have been reported as 12 excursions. The DMR reported the total nitrogen monthly average loading as 0.41 lbs/day, the weekly average total nitrogen loading as 0.49 lbs/day, the total nitrogen monthly average concentration as 11.68 mg/l, and the weekly average total nitrogen concentration as 15.47 mg/l with 5 excursions. The total nitrogen weekly average loading should have been reported as 0.56 lbs/day and the monthly average concentration should have been reported as 11.86 mg/l. The number of excursions for the total nitrogen should have been reported as 9 excursions. The DMR reported the average flow as 3,390 gallons/day and the maximum flow as 7,500 gallons/day.

September 2008 - The DMR shows noncompliance for total phosphorus and total nitrogen concentrations and loadings. The laboratory data sheets were available and complete; however the chains of custody were not available on-site. Mr. Main stated that the laboratory maintains the chains of custody. The DMR reported the total phosphorus monthly average loading as 0.34 lbs/day, the weekly average total phosphorus loading as 0.40 lbs/day, the total phosphorus monthly average concentration as 10.57 mg/l, and the weekly average total phosphorus concentration as 12.35 mg/l with 4 excursions. The number of excursions for the total phosphorus should have been reported as 10 excursions. The DMR reported the total nitrogen monthly average loading as 0.33 lbs/day, the weekly average total nitrogen loading as 0.42 lbs/day, the total nitrogen monthly average concentration as 11.01 mg/l, and the weekly average total nitrogen concentration as 16.68 mg/l with 4 excursions. The number of excursions for the total nitrogen should have been reported as 6 excursions. On 9/18/2008, there were two sets of laboratory results for BOD, TSS and fecal coliform. The BOD result of 1.37 mg/l, TSS result of 0.53 mg/l, and fecal coliform count of <2 MPN were reported on the DMR. The BOD results of 0.95 mg/l, the TSS result of 0.74 mg/l, and fecal coliform count of <2 MPN were not reported on the MOR, and no chain of custody was available. If the second sample was collected at the final effluent sample point using approved sampling and preservation methods, the data should be included on the MOR by averaging the two data sets. There was no 5 day letter in the file for the total nitrogen and total phosphorus excursions, as required by the permit.

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August 2008 - The DMR shows noncompliance for total phosphorus and total nitrogen concentrations and loadings. The laboratory data sheets were available and complete; however the chains of custody were not available on-site. Mr. Main stated that the laboratory maintains the chains of custody. The DMR reported the total phosphorus monthly average loading as 0.47 lbs/day, the weekly average total phosphorus loading as 0.68 lbs/day, the total phosphorus concentration as 11.60 mg/l, and the weekly average total phosphorus concentration as 13.23 mg/l with 4 excursions. The number of excursions for the total phosphorus should have been reported as 10 excursions. The DMR reported the total nitrogen monthly average loading as 0.41 lbs/day, the weekly average total nitrogen loading as 0.68 lbs/day, the total nitrogen monthly average concentration as 11.21 mg/l, and the weekly average total nitrogen concentration as 17.45 mg/l with 4 monthly average excursions. The number of excursions for the total nitrogen should have been reported as 7 excursions. There was no 5 day letter in the file for the total nitrogen and total phosphorus excursions, as required by the permit.

July 2008 - The DMR shows noncompliance for total phosphorus and total nitrogen concentrations and loadings. The laboratory data sheets were available and complete; however the chains of custody were not available on-site. Mr. Main stated that the laboratory maintains the chains of custody. The DMR reported the total phosphorus monthly average loading as 0.42 lbs/day, the weekly average total phosphorus loading as 0.59 lbs/day, the total phosphorus concentration as 8.45 mg/l, and the weekly average total phosphorus concentration as 11.09 mg/l with 5 excursions. The number of excursions for the total phosphorus should have been reported as 12 excursions. The DMR reported the total nitrogen monthly average loading as 1.07 lbs/day, the weekly average total nitrogen loading as 2.09 lbs/day, the total nitrogen monthly average concentration as 21.34 mg/l, and the weekly average total nitrogen concentration as 26.90 mg/l with 4 monthly average excursions. The number of excursions for the total nitrogen should have been reported as 12 excursions. On 7/24/2009, the ortho-Nitrate result of 3.25 mg/l was transcribed as 3.52 mg/l on the MOR and the total nitrogen result of 23.35 mg/l was transcribed as 23.62 mg/l on the MOR. There was no 5 day letter in the file for the total nitrogen and total phosphorus excursions, as required by the permit.

June 2008 - The DMR shows compliance. The laboratory data sheets were available and complete; however, the chains of custody were not available on-site. The DMR reported the maximum flow of 6,700 gallons/day, but failed to report the average daily flow of 4,770 gallons/day.

May 2008 - The DMR shows compliance. The laboratory data sheets were available and complete; however, the chains of custody were not available on-site. The DMR reported the maximum flow of 8,800 gallons/day, but failed to report the average daily flow of 4,355 gallons/day. On 5/1/2009, the total nitrogen result of 30.54 mg/l was transcribed as 30.63 mg/l on the MOR. On 5/29/2009, the total nitrogen result of 28.97 mg/l was transcribed as 29.04 mg/l on the MOR.

April 2008 - The DMR shows compliance. The laboratory data sheets were available and complete; however, the chains of custody were not available on-site. The DMR failed to report the sample frequency and sample type for total nitrogen and total phosphorus.

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C. Maintenance and Operations

The facility consists of grinder pumps, two 6,000 gallon aeration basins, 2 sand filters followed by UV and a sludge holding tank. A new lift station was installed 2 years ago at the plant and has a 6,000 gallon capacity. A sand filter is backwashed every night. The facility is equipped with a propane backup generator which serves the main lift station, the WWTP and the visitors center. The facility has a 2,000 gallon pumper truck which is used to transport sludge to Berlin WWTP and for pumping out the 350-600 gallon waste holding tanks for the porta potties located in the national park. The septage from the waste holding tanks is transferred to the Island Station pump station, which is equipped with a 4,000 gallon capacity. The septage in the Island pump station is step fed into the new 6,000 gallon capacity pump station to avoid shocking the WWTP.

Mr. Main stated that the influent to the facility will be pumped from the 6,000 gallon well of the main pump station to the pumper truck and transported to the Berlin WWTP during upgrade activities, which is scheduled to begin in August 2009.

Mr. Steven E. Main holds Operators License No. 0613 for Wastewater 3 and Water Treatment 3, which expires 10/1/2009. Mr. Main does not hold a superintendent's license, as required. Jocelyn Paige Korb holds Temporary License No. 1275 for Wastewater 3 and Water Treatment 3, which expires 4/1/2010.

D. Self Monitoring Program

The facility measures the flow which is reported on a Badger Read-o-Matic Model 100, which is not equipped with a recording device, has not been calibrated and is located in the line from the sand filters to the UV system. The facility also has an ISCO 4230 Bubbler Flow meter, which has not been calibrated and was out of paper at the time of the inspection. The ISCO flowmeter read 334.2 gpm and total flow of 02989696 gallons. The facility also measures pH, and dissolved oxygen. The facility maintains daily calibration logs for pH, and D.O.

E. Effluent Receiving Water

The facility was not discharging at the time of the inspection.

F. Sampling

The facility was not discharging at the time of inspection and therefore samples were not collected during the inspection.

G. Stormwater Pollution Prevention Plan

This facility is not required to develop nor implement a stormwater pollution prevention plan.

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H. Corrective Actions

1. The facility is reminded that the facility is required to employ or contract with a Superintendent who has been licensed by the Maryland Board of Waterworks and Waste System Operators.
2. The facility is reminded that flowmeters should be calibrated on an annual basis and be equipped with a recording device.
3. Mr. Main is reminded that the facility should retain copies of the chain of custody for all effluent samples sent to Ocean City for analysis.
4. Mr. Main is reminded that under Section III.B.1. of the permit, the facility is required to call MDE within 24 hours if the permittee does not comply or will be unable to comply with any permit condition. The permittee is required to follow-up the oral notification with a written notification within 5 days of the oral notification.
5. Mr. Main is reminded that the DMRs are to be submitted and postmarked no later than the 28th of the month following the reporting period.
6. Mr. Main is reminded that the facility should report the average daily flow on the DMRs.

Inspector: _____
Michele Burroughs

Received by: _____